The Chicago Department of Water Management has approximately

- **550,000** Customer Accounts

And receives an average of

- **300,000** Calls per Year
The Chicago Department Of Water Management

Residential,
Multi-Family,
Hi-Rise Buildings,
Commercial,
Industrial,
Institutional.
The Chicago Department Of Water Management

Individual Home Owners,
Business Owners,
Buildings Administrators,
Real Estate Agents,
Lawyers, etc.
The CDWM’s Customers were showing dissatisfaction

They Could not reach a CSR quick enough.
They Could not resolve their needs by phone.
Some calls were being lost.

Improve the Customer Service Center System ASAP.
Define the scope of the work to upgrade the system.
An initial 3-month assessment of the existing system:

- Monitoring and Surveys of incoming calls,
- Written questionnaires to the CSRs,
- Interviews with the CSRs.

Assessment of: existing technology,
existing process,
the people working in the call center.
“How technology ruined Customer Service.”

“A study done this year concluded that 9 out of 10 automated voice response systems deserved a flunking grade.”

“15% of the callers using an automated voice–response system feel satisfied.”

“70% feel customer rage.”
Extensive research on existing IVR Systems.

Electric Power Companies,
Finance Companies,
Gas Companies,
Government Agencies,
Pharmaceutical Companies,
Retail Companies,
Travel Companies,
Water Department in other Cities.
We learned things we did not like, as callers.

Existing IVR Systems:
Are “Convenient” for the company that owns them;
Tend to “Herd” the callers where and how the company want them to go;
Pay little or no attention the caller’s “real” needs or questions;
They are not at all like “talking to a live agent”.
We wanted our IVR system to be:

1. Convenient for Customers;

2. Suited to the specific needs and services of the CDWM;

3. Efficient but Friendly.
Convenient for Customers

A System:
That would address questions that the caller really want to ask.

Where the customers would not feel “trapped”,

Where the caller could opt-out to a live agent, when desired.
- A system suited to the specific needs of the CDWM -

Unique features of the CDWM, such as:

Payment Locations, Metered Account Billing,
Full Payment Certificates, Non-Metered Account Billing,
Senior Exemptions, Water Meter Information,
Specific Water Account Details.
The Chicago Department Of Water Management

- Efficient but friendly -

A System that would be painless and easy to talk to,

A that would be almost like “Talking to live agent”.
Interactive Voice Response (IVR) based on directed dialogs with barge-in,

Voice Extensible Markup Language (VXML)

Dynamic Host Configuration protocol (DHCP) Server,

Computer Telephony Integration (CTI) With Screen Pop-up Windows,

Internet Protocol (IP) Phones, etc.
The Chicago Department Of Water Management

A Nortel Media Processing Server MPS-500
With 72 T1 Ports,
Nuance Speech Recognition Software,
Scansoft Oscars (OSR 2.1),
Text-to-Speech (TTS),
Dual-Tone Multi-Frequency (DTMF), etc.
The DWM Contact Center receives an average of 300,000 Calls per year. Approximately 27% (81,000 calls) are now staying Within the IVR system.
Customers now have a much shorter wait time for a Customer Service Representative (CSR).

The Average waiting time to talk to a CSR has been reduced to approximately one minute.

Customers are now able to make payments over the phone, through IVR, without ever having to wait.
Customers are accepting and using the system at a continued increase rate each month.

The first half of 2006 the number of payments made through the IVR has consistently improved each month.

Customer complaints have been reduced to a trickle of a few isolated complaints, which in many cases are not even related to the IVR.
The CDWM Contact Center has the capacity for 30 Customer Service Representatives (CSRs).

Currently, there are 14 full-time CSRs and a CSR/Supervisor handling all customer queries.
The CDWM-IVR system allows Callers to get Information on:

Current account balance and payment status,
Payment center locations and business hours,
Water Meter reading status,
Full Payment certificates,
Senior citizen exemption,
Water-service: turn-on and shutoff.
It also gives information on legal requirements,

It references callers to the legal department

In cases of Real Estate sale, purchase, or foreclosure
The CDWM-IVR system allows customers to:

Make payments over the telephone using check or credit card.

Establish a payment arrangement plan.

Make monthly payments on the payment plan.

Hear “Major Emergency” notification messages and report an emergencies.

It also supports Spanish speaking callers by allowing the option to transfer to a Spanish speaking agent.
We set out to have a system that would meet three “Intangibles”:

1. Be Convenient for our Customers.
2. Be Suited to the specific needs and services of the CDWM.
3. Be efficient but friendly.
The decrease in customer complaints,

An obviously improved customer satisfaction,

Tell us that we met our first “intangible”.
The continuously improving performance measurement statistics,

The increase in calls staying within the IVR,

The sustained monthly increase in payments through the IVR,

Tell us that we met the second “intangible” too.
Recently, a lady caller who was transferred to a live Agent by the IVR system (apparently, not realizing she had been talking to our IVR),

Recited her account number and said to the agent Who took the call:

“ The lady who was helping me was very nice but she could not understand me when I read out the account number, did you understand me?”.
The Chicago Department of Water Management

IVR TEXT FLOW CHART

1. Thank you for calling the City of Chicago, Department of Water Management. Para continuar Español, Marque el número "2" ("dos"). [For Spanish, Press "2" ("Two").]

2. Please note that your call may be monitored for quality assurance.

3. When you hear the option you want, please interrupt and make that selection at any time. If you are calling about a major emergency, such as a water main break, please say "EMERGENCY" or if your water has been shut off, say "WATER SHUTOFF".

Main Menu

You can say "BILLING AND PAYMENT", "PAYMENT LOCATIONS", "FULL PAYMENT CERTIFICATES", "SENIOR EXEMPTIONS", or "MORE OPTIONS".

To hear the list again, say "REPEAT THAT". Which would you like?

Transfer to a CSR
ASSISTANCE IN SPANISH LANGUAGE

EMERGENCY NOTIFICATION MESSAGE

In cases of great emergency such as:
- Water main line breaks,
- Pump station emergencies,
- Massive water-pressure loss,
- Boil orders, etc.

The DWM will issue and insert here an Emergency Notification Message to let subsequent callers know that a given emergency has been reported already and is currently being attended to.
BILLING INFORMATION
MAKE A PAYMENT
PAYMENT PLAN
Non-Metered
Metered
Water Meter
Full Payment Certificates may be obtained at our Bureau of Billing and Customer Services, located at 333 South State Street Suite LL-10, or at our website: www.cityofchicago.org/watermanagement. There is a 25$ processing fee for applications and please allow ten business days for applications and please allow ten business days for application processing. To hear additional information on full payment certificates, say “MORE INFORMATION“, to hear this information again, say “REPEAT THAT“. Otherwise, say “CONTINUE“.

If you are selling a property, it is necessary to obtain a “Full Payment Certificate“ for closing. The completion of the certificate will ensure that the seller’s account is paid in full. The certificate will also ensure that the billing name and address for the new owner are setup correctly. Lack of accurate billing information may result in the imposition of late charges. To hear how to get a certificate again, say “REPEAT THAT“. Otherwise, say “CONTINUE“.
The following locations are available to accept payments in person and have the listed hours of operations:

- 333 South State Street, Room LL10:
  8:30 am to 5:00 pm from April 1 to November 30 Monday through Friday,
  8:30 am to 4:30 pm from December 1 to March 31 Monday through Friday.

- 121 North LaSalle, Room 107; Monday through Friday, 8:00 am to 5:00 pm

For the following locations:
- 800 North Kedzie
- 2006 East 95th Street
- 2550 West Addison
- 4770 South Kedzie

The business hours are:
- 8:00 am to 5:00 pm - Monday
- 8:00 am to 6:30 pm - Tuesday through Friday
- 8:00 am to 3:30 pm - Saturday

In addition, you can make payments online at www.cityofchicago.org/watermanagement or at any currency exchange. Please note that a payment made via a currency exchange may take five days or longer before it is posted to your account.

Would you like to hear the location information again?
Your payment transaction processing was unsuccessful. To re-enter your payment information or to select a different payment method, say "RE-ENTER PAYMENT INFO" or Press "1".
If you would like to speak to a Customer Service Representative, say "Customer Service" or Press "0".

Transfer to a CSR.

SUCCESSFUL

Your payment transaction has been successfully processed. If your water was shut-off, your service should be restored within 24 hours on normal business days only. Please note that you must be on site in order to have your water turned-on.

DB AUTHORIZATION INFO

DWM NAVIGATE ITEM LIST

UNSUCCESSFUL
Empowering Your customers and employees with speech technologies

SpeechTEKI 2006 Empower
The Voice Solutions Showcase

Thank You